

### **Amendments to the Specification**

Please replace the section heading on page 1, line 2 with the following amended section heading:

#### **TECHNICAL FIELD OF THE INVENTION**

Please replace the section heading on page 1, line 4 with the following amended section heading:

#### **BACKGROUND OF THE INVENTION**

Please replace the section heading on page 2, line 7 with the following amended section heading:

#### **SUMMARY OF THE INVENTION**

Please replace the section heading on page 2, line 22 with the following amended section heading:

#### **BRIEF DESCRIPTION OF DRAWINGS**

Please replace the section heading on page 3, line 14 with the following amended section heading:

#### **DETAILED DESCRIPTION OF THE INVENTION**

Please replace the paragraph beginning on page 7, line 25, and ending on page 8, line 12, with the following amended paragraph:

Applying equation (3) with  $\alpha=3.5$  to the one-dimensional DCT transform of equation (4) yields the following denoiser transform:

$$Z = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 2 & 1 & 1 & 0 & 0 & -1 & -1 & -2 \\ 2 & 1 & -1 & -2 & -2 & -1 & 1 & 2 \\ 1 & 0 & -2 & -1 & 1 & 2 & 0 & -1 \end{pmatrix} \quad (5)$$

$$\begin{bmatrix} 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 1 & -2 & 0 & 1 & -1 & 0 & 2 & -1 \\ 1 & -2 & 2 & -1 & -1 & 2 & -2 & 1 \\ 0 & -1 & 1 & -2 & 2 & -1 & 1 & 0 \end{bmatrix}$$

In this implementation, the diagonal matrix  $\Lambda$  satisfying the condition that  $\mathbf{T}\mathbf{T}'\mathbf{Z}\mathbf{Z}'=\Lambda$  is given by equation (5):

$$\Lambda = \begin{bmatrix} 8 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 12 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 20 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 12 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 8 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 12 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 20 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 12 \end{bmatrix} \quad (6)$$

Other exemplary values for the scaling factor  $\alpha$  in equation (3) include 3.0 and 2.5.

Please replace the paragraph beginning on page 10, line 12, and ending on page 10, line 25, with the following amended paragraph:

~~Referring to FIG. 5, in~~ In some implementations, the sets of forward transform coefficients are transformed in accordance with respective nonlinear thresholding transformations ( $T_1, T_2, \dots, T_K$ ). FIG. 5 shows a graph 74 of threshold output plotted as a function of input coefficient values in accordance with an embodiment of the denoiser module 68. In particular this embodiment, the forward transform coefficients are nonlinearly transformed by setting to zero each coefficient with an absolute value below a respective threshold ( $t_{ij}$ , where  $i, j$  refer to the indices of the quantization element, with  $i$  having values in the range of 0 to  $M-1$  and  $j$  having values in the range of 0 to  $N-1$ ) and leaving unchanged each coefficient with an absolute value equal to or above a respective threshold ( $t_{ij}$ ). Quantization matrices 76 (or "Q Matrices") are used to set the parameters  $t_{ij}$  for the nonlinear thresholding transformations ( $T_1, T_2, \dots, T_K$ ). In some implementations, the quantization matrices contain the same quantization parameters  $q_{ij}$  that were originally used to compress image 12. These quantization parameters may be stored in the compressed image 12 in accordance with a standard image compression scheme (e.g., JPEG).